# () FRETZ

**TOOLS** 



The pleasure of the process...

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Fluting with the HMR-8 Hammer and Progressive Stakes

#### FRETZ HAMMERS AND THEIR USES

**Planishing** is smoothing the metal against a stake by making the hammer blows overlap. This is a stretching technique which forms the metal to the underlying stake. Planishing can be on flat, convex or concave shapes.

**Raising** is the compression of metal down to the stake without stretching it. The technique involves angling the metal off the stake so there is an air gap for the compression of the metal.

**Embossing** is the stretching of the metal by hammering from the inside of the form. This group of hammers is also used to form flutes and form the metal while it is supported by pitch or wax. This is similar to chasing but is done by directly striking the metal with the appropriate hammer.

**Blocking** is a form of embossing when the metal is hammered into a hollow cavity. Free form Blocking is done with a sandbag.

**Chasing** is a way of forming the metal with a hammer and small chisels or punches. The metal is compressed downwards as the chisel strikes the metal over pitch, wax or an underlayment that supports the overall form.

**Riveting** is the compression of a rod or tube so the ends flare and hold two or more units together as the rod or tube passes through the parts. The Riveting Hammer's crosspein end flares the rod so it develops a head and the broad face smoothes out the flaring marks.

#### FRETZ JEWELERS' HAMMERS



#### HMR-1 PLANISHING HAMMER

The Planishing Hammer is for smoothing metal. The round side is used if the metal has previous raising hammer marks and these need to be smoothed out.

The flat side will refine the hammer marks from the rounded side of the Planishing Hammer to a nearly smooth finish. This is the most used hammer.

FACE SIZES: 19mm and 19mm - HEAD LENGTH: 74mm - HANDLE LENGTH: 220mm



#### HMR-2 WIDE RAISING HAMMER

The Wide Raising Hammer can be used to raise sheet metal into a bowl against a wooden stake or a metal T-stake. It is also useful for raising in cylinders to form a concave shape. This same hammer also makes it possible to planish subtle concave shapes.

FACE SIZES: 20mmx10mm and 20mmx8mm - HEAD LENGTH: 74mm - HANDLE LENGTH: 220mm



#### HMR-3 NARROW RAISING HAMMER

The Narrow Raising Hammer is for raising small cylinders and concave shapes. The thinner heads allow the hammer to fit into tighter curves for raising and planishing. It is also useful for forging.

FACE SIZES: 20mm x 6mm and 20mm x 5mm - HEAD LENGTH: 74mm - HANDLE LENGTH: 220mm



#### HMR-4 LARGE EMBOSSING HAMMER

The Large Embossing Hammer is used to dome metal from the inside. The metal is stretched from the inside as it is supported on a sandbag or a depression carved in wood. Doming a piece of metal before raising makes it easier to control because the shape becomes rigid. The Embossing Hammer also leaves a very interesting dimpled texture on flat and slightly domed metal when hammering on the outside of a form against a stake.

FACE SIZES: 15mm x 12mm - HEAD LENGTH: 74mm - HANDLE LENGTH: 220mm



#### **HMR-5 SMALL EMBOSSING HAMMER**

The Small Embossing Hammer is used to form small raised areas by hammering from the inside in preparation for chasing or general shaping. This hammer leaves a very fine dimpled texture that can be greatly varied by the strength of the blow.

FACE SIZES: 5mm and 3mm - HEAD LENGTH: 72mm - HANDLE LENGTH: 220mm













#### HMR-6 PLANISHING HAMMER W/ INSERTS-SINGLE ENDED VERSION

This Planishing Hammer has a single nylon end which can be removed with a Hex Key. The flat nylon end forms metal while leaving it smooth. The metal end is slightly domed to make it easier to strike flat and slightly domed metal. Designed primarily for the bench jeweler who sizes rings and only wants one hammer.

FACE SIZES: 19mm and 19mm - HEAD LENGTH W/O ENDS: 72mm - HANDLE LENGTH: 220mm



#### HMR-7 DOUBLE ENDED INSERT HAMMER

The Double Insert Hammer has nine (9) rylon ends that work metal without leaving marks. The range of shapes of the inserts duplicates planishing, embossing and raising hammers. Useful for forming metal without stretching. The hammer has enough weight to move metal with assurance.

FACE SIZES: 19mm - HEAD LENGTH W/O ENDS: 72mm - HANDLE LENGTH: 220mm



#### HMR-8 ROUNDED NARROW RAISING/EMBOSSING HAMMER

The Rounded Narrow Raising Hammer can emboss narrow pod or oblong shapes. Smoother overlapping marks are easier on long thin shapes than with a round embossing hammer. A good hammer to form curved flutes.

FACE SIZES: 19mm x 6mm - HEAD LENGTH W/O ENDS: 73mm - HANDLE LENGTH: 220mm



#### HMR-9 ROUNDED WIDE RAISING/EMBOSSING HAMMER

The wide & longer profile of this hammer makes it ideal to block bowls and broader width strips into concave shapes. As with all embossing hammers, this hammer is intended to stretch the metal from the inside. This hammer is useful for forming broad flutes with stake and pitch.

FACE SIZES: 19mm x10mm and 19mm x 7mm - HEAD LENGTH W/O ENDS: 73mm HANDLE LENGTH: 220mm





#### HMR-12 SHARP TEXTURING/RAISING HAMMER

This Hammer is for rings and other surfaces when sharp parallel hammered textures are needed. It can also be used to make extreme tight curves when raising portions of jewelry.

FACE SIZES:  $19\text{mm} \times 1\text{mm}$  and  $19\text{mm} \times 1.5\text{mm}$  - HEAD LENGTH W/O ENDS: 72mm HANDLE LENGTH: 220mm



#### HMR-13 SHORT SHARP TEXTURING / RAISING HAMMER

A substitute for HMR-12 when textures on wire or very small surfaces are desired. FACE SIZES:  $15 \text{mm} \times 1 \text{mm}$  and  $15 \text{mm} \times 1.5 \text{mm}$  HEAD LENGTH W/O ENDS: 72 mm HANDLE LENGTH: 220 mm



#### HMR-14 TEXTURING HAMMER - "RAW SILK"

A planishing hammer with randomly ground heads that gives the texture of "Raw Silk". Similar to a texture that could be rolled onto flat metal but not possible with dimensional shapes.

FACE SIZES: 19mm and 19mm - HEAD LENGTH: 74mm

HANDLE LENGTH: 220mm



#### HMR-15 TEXTURING HAMMER - "CIRCLE IMPRINTS"

This Hammer makes a swirling texture by over lapping the blows. The more the surface is textured, the more dramatic the swirling effect.

FACE SIZES: 5mm and 3mm HEAD LENGTH: 73mm

HANDLE LENGTH: 220mm





















#### **HMR-17 THE CHASING HAMMER**

A modern design chasing hammer of medium weight. The handle has a pistol grip. The balance of this hammer makes each hammer blow effortless.

FACE SIZES: 29mm and 12mm

HEAD LENGTH: 69mm - HANDLE LENGTH: 240mm

#### HMR-19 JANUS CHASING HAMMER

The Janus Hammer, named for the two-faced god, is a double faced chasing hammer with a straight handle and pear shaped grip. One face is parallel with the handle, the other is slightly tilted. The different angles make various working positions possible.

FACE SIZES: 28mm and 28mm

HEAD LENGTH: 66mm - HANDLE LENGTH: 260mm

#### HMR-20/HMR20 M CHASING HAMMERS

These chasing hammers are classic shapes with pistol grip handles. The HMR-20 is the heavy weight version for heavy gauge metal while the HMR-20 M is of medium weight.

HMR-20: FACE SIZES: 31mm and 13mm

HEAD LENGTH: 74mm - HANDLE LENGTH:235mm HMR-20M : FACE SIZES: 31mm and 13mm HEAD LENGTH: 68mm - HANDLE LENGTH: 235mm

#### HMR-21 GOLDSMITHING HAMMER

The Goldsmithing Hammer is the bench jewelers' choice for ring sizing and bezel work. The crosspein end is slightly curved, making a very interesting texture. The long handle allows the craftsperson to grip at different positions to change the striking force.

FACE SIZES: 17mm and 12mm x 2mm

HEAD LENGTH: 91mm - HANDLE LENGTH: 290mm

#### HMR-22 "SANDSTONE TEXTURE" HAMMER

The HMR 22 when used with overlapping blows will result in a texture similar in appearance to broken sandstore. This texture can add dramatic contrast when used next to smooth surface areas.

FACE SIZES: 19mm

HEAD LENGTH: 75mm - HANDLE LENGTH: 238mm

#### SH-1 JEWELER'S SLEDGE HAMMER

The SH-1 is a very heavy hammer which makes it ideal to forge and form heavy metal stock. The relatively small round face allows the metalsmith to see the surface of the work as it is being formed. The crosspein end of the hammer moves the matal rapidly as it is being "drawn out".

FACE SIZES: 28mm and 24mm x 4mm

HEAD LENGTH: 133 mm - HANDLE LENGTH: 288mm



#### SILVERSMITHING HAMMERS



#### **HMR-101 PLANISHING HAMMER**

The Planishing Hammer is for smoothing metal. The round side is used if the metal has previous raising hammer marks and these need to be smoothed out. The flat side will refine the hammer marks from the rounded side of the Planishing Hammer to a nearly smooth finish. This hammer is also used to size rings, form bezels and general forming of metal against mandrels and stakes. This is the most used hammer for larger work.

FACE SIZES: 23mm and 23mm - HEAD LENGTH: 75mm - HANDLE LENGTH: 250mm





#### HMR-102 WIDE RAISING HAMMER

The Wide Raising Hammer can be used to raise sheet metal into a bowl against a wooden stake or a metal T-Stake. It is also useful for raising in a cylinder to form a concave shape. The center of this crosspein is slightly flat. This feature keeps a raised shape uniform withthout deep creases.

FACE SIZES: 23mm x12mm and 23mm x 9 mm - HEAD LENGTH: 102mm - HANDLE LENGTH: 250mm





#### HMR-102P WIDE COLLET HAMMER

The HMR-102P is same as the HMR-102 but the middle of each face is rounded so it fits into concave shapes for planishing.

FACE SIZES: 23mm x 12mm and 23mm x9mm





#### HMR-103 NARROW RAISING HAMMER

The Narrow Raising Hammer is used for raising small cylinders and concave shapes. The thinner faces allow the hammer to fit into tighter curves for raising and planishing. It is also useful for forging and texturing.

FACE SIZES: 23mm x 8mm and 23mm x 6 mm - HEAD LENGTH: 102mm - HANDLE LENGTH: 250mm





#### HMR-104 LARGE EMBOSSING HAMMER

The Large Embossing Hammer is used to dome metal from the inside. The metal is stretched from the inside as it is supported on a sand bag or a depression carved in wood. Doming a piece of metal before raising makes it easier to control because the shape becomes rigid. The Embossing Hammer also leaves a very interesting dimpled texture on flat and slightly domed metal when hammering on the outside of a form.

FACE SIZES: 19mm and 14mm - HEAD LENGTH: 102mm - HANDLE LENGTH: 250mm





#### HMR-105 SMALL EMBOSSING HAMMER

The Small Embossing Hammer is used to form small raised areas by hammering from the inside of a form in preparation for chasing or general shaping. This hammer leaves a very fine dimpled texture that can be greatly varied by the strength of the blow.

FACE SIZES: 10mm and 7 mm - HEAD LENGTH: 105mm - HANDLE LENGTH: 250mm



#### HMR-106 BLOCKING HAMMER

The Blocking Hammer is used to sink metal into a form or a sandbag. The head shape is between the Large Embossing HMR-104 ball and the curved end of the Planishing Hammer HMR-101. The extra weight of this hammer is perfect for blocking bowls or large jewelry shapes while leaving the domed surface relatively smooth.

FACE SIZES: 19mm and 14mm - HEAD LENGTH: 105mm - HANDLE LENGTH: 250m



#### HMR-107 LARGE INSERT HAMMER

The HMR - 107 is similar to the HMR - 7, but is heavier and larger. The eleven (11) interchangeable ends are ideal for concave and convex forming of large jewelry and small hollowware with the M - 100 Series Mushroom Stakes. This hammer will not mar or stretch the metal.

FACE SIZES: 25mm - HEAD LENGTH: 87mm - HANDLE LENGTH: 250m



#### HMR-108 ROUNDED NARROW RAISING /EMBOSSING HAMMER

The Rouned Narrow Rasing Hammer can emboss narrow pod or oblong shapes. Smoother overlapping marks are easier on long thin shapes than with a round embossing hammer. This hammer is used to flute convex forms with the M-113A and the M-113B Fluting Stakes.

FACE SIZES: 7.2 mm x 22.4mm and 3.8 mm x 22.4 mm HEAD LENGTH: 102 mm - HANDLE LENGTH: 250 mm



#### HMR-109 ROUNDED WIDE RAISING / EMBOSSING HAMMER

The Wide and Longer profile of this hammer makes it ideal to block bowls and broader width strips into concave shapes. As with all embossing hammers, this hammer is intended to strech the metal from the inside. The broad curved crosspein faces are ideal for planishing deep concave shapes with the M- 104 and M-105 insert stakes.

HEAD LENGTH: 102 mm - HANDLE LENGTH: 250 mm



#### 300 SERIES HAMMERS



#### HMR-301 LARGE STRETCHING HAMMER

The HMR-301 is a heavy hammer with an arched head. The curved broad crosspein face makes this an ideal hammer for stretch forming heavy gauge metal. Stretch forming is an ancient way of forming metal by hammering from the inside of a vessel or shape to change the gauge and shape of the metal. The curved head follows the arm in an arc so a fairly deep concave metal surface can be easily worked against a wooden form or a flat anvil surface.

FACE SIZES: 30X24mm and 30x20mm HEAD LENGTH: 160mm HANDLE LENGTH: 280mm



#### HMR-302 NARROW STRETCHING HAMMER

The HMR-302 is similar to the HMR-301 but with narrower faces. This hammer is the correct choice for stretching and moving the metal within tight curves. The HMR-302 is a good hammer for shaping the area around the opening of a bowl to dome it inward.

FACE SIZES: 30X15mm and 30x9mm HEAD LENGTH: 160mm HANDLE LENGTH: 280mm



#### HMR-303 BULL PEEN HAMMER

The HMR-303 is a heavy hammer to remove the marks from the inside of a shape that has first been stretched with the HMR-301, 302 or 304 hammers. The HMR-303 has two faces with different widths and curves. The selection of which face is correct will depend on the inside curvature of the project. The larger face is slightly domed while the smaller face is more cured. The weight of this hammer is also useful for forging heavy wire or ingots.

FACE SIZES: 35mm and 30mm HEAD LENGTH: 160mm HANDLE LENGTH: 280mm



#### HMR-304 EMBOSSING HAMMER

The HMR-304 has a short heavy head that is easy to control while working on shallow concave shapes. The faces are rounded crosspeins. The weight of the hammer makes the process of hammering heavy gauge metal easier because the weight of the hammer does the work rather than swinging a lighter hammer with great arm force. The HMR-304 makes a bold texture on fold formed shapes.

FACE SIZES: 30X20mm and 30x15mm HEAD LENGTH: 128mm HANDLE LENGTH: 280mm



#### HMR-305 LARGE RAISING HAMMER

The HMR-305 is a broad faced raising hammer that moves the metal quickly when the metal is hammered from the outside of a broad shape. The metal is compressed down to the stake and is left in a relatively smooth condition when compared to bowls or hollowware that are raised with a narrow crosspein. The HMR-305 is often used for angle raising with a R-101 Raising Stake.

FACE SIZES: 30X20mm and 30x15mm HEAD LENGTH: 112mm HANDLE LENGTH: 280mm



#### PRECISIONSMITH HAMMERS













#### HMR-401 PRECISIONSMITH PLANISHING HAMMER

The Precisionsmith Planishing Hammer is the ideal hammer when working on small jewelry elements that need to be planished or textured with a delicate shimmer. The small faces make it easy to see the project as it is being worked.

FACE SIZES: 13mm and 13mm HEAD LENGTH: 63mm HANDLE LENGTH: 220mm

#### HMR-402 PRECISIONSMITH WIDE RAISING HAMMER

The Precisionsmith Wide Raising Hammer is excellent when forming shallow concave curves on tubing or sheet metal. This hammer also doubles as a collet planishing hammer when subtle metal hammer marks are wanted on wire or plate. FACE SIZES:  $13mm \times 6mm$  and  $13mm \times 4mm$ 

HEAD LENGTH: 65mm HANDLE LENGTH: 220mm

#### HMR-403 PRECISIONSMITH NARROW RAISING HAMMER

The Precisionsmith Narrow Raising Hammer will fit into very narrow concave forms or grooves. This hammer makes a very interesting long mark texture on domed band rings and other metal projects.

FACE SIZES: 13mm x 3.5mm and 13mm x 2.5mm

HEAD LENGTH: 64mm HANDLE LENGTH: 220mm

#### HMR-404 PRECISIONSMITH LARGE EMBOSSING

The Precisionsmith Large Embossing is a texturing hammer that has two ball pein ends. This hammer is for texturing small shapes with a classic shimmering effect.

FACE SIZES: 10mm and 8mm HEAD LENGTH: 74mm HANDLE LENGTH: 220mm

#### HMR-405 PRECISIONSMITH SMALL EMBOSSING HAMMER

The Precisionsmith Small Embossing Hammer gives metal a very small dimpled texture. This hammer texture can vary greatly by changing the force of each hammer blow.

FACE SIZES: 4mm and 2mm HEAD LENGTH: 63mm HANDLE LENGTH: 220mm

#### HMR-406 RIVETING HAMMER

The Riveting Hammer is useful in riveting pin stems and other cold connections. This hammer has a slightly curved crosspein end. Traditionally it is flat. The curved crosspein makes it very useful for texturing flat surfaces. The planishing end is also domed. This is a must have hammer.

FACE SIZES: 9mm Square and 9mm x1.5mm

HEAD LENGTH: 71mm HANDLE LENGTH: 220mm





#### HMR-408 PRECISIONSMITH ROUNDED NARROW HAMMER

The Precisionsmith Rounded Narrow Hammer is for embossing thin metal and for direct chasing. The narrow faces are well suited to shape narrow concave forms. As with all curved faced hammers they are easy to use on flat metal.

FACE SIZES: 14mm x 4mmand 13mm x3mm HEAD LENGTH: 64mm HANDLE LENGTH: 220mm



#### HMR-409 PRECISIONSMITH ROUNDED WIDE HAMMER

The Precisionsmith Rounded Wide Hammer is for broad concave shapes and direct chasing. The broad faces will make sinking small curves smoother and the hammer marks will be subtle. When striking flat sheet the mark will be oval.

FACE SIZES: 13mm x 6mm and 13mm x4.5mm HEAD LENGTH: 63mm HANDLE LENGTH: 220mm



#### HMR-412 PRECISONSMITH SHARP TEXTURING HAMMER

The Precisionsmith Sharp Texturing Hammer has straight sharp faces. One face is very sharp and the other slightly less so. The resulting textures are similar to parallel engraved lines. This hammer makes polished metal shimmer.

FACE SIZES: 14mm x 1.5mm and 14mm x 1mm HEAD LENGTH: 64mm HANDLE LENGTH: 220mm



#### HMR-413 PRECISIONSMITH SHARP PETITE HAMMER

The Precisionsmith Sharp Petite Hammer is similar to the HMR-12 but with smaller curved faces. The curved faces make it possible to strike flat metal. A flat face against flat metal is nearly impossible and this hammer overcomes that limitation. The scale of this hammer is very dainty and useful for small jewelry elements.

FACE SIZES: 6mm x 1mm and 6mm x .5 mm HEAD LENGTH: 62mm HANDLE LENGTH: 220mm



#### HMR-417 PRECISIONSMITH CHASING HAMMER

The HMR-17 is a small chasing hammer used to chase very fine detailed work. The ballpein end can also be used for delicate texturing.

FACE SIZES: 21mm x 9mm HEAD LENGTH: 54mm HANDLE LENGTH: 220mm





#### MICHAEL GOOD COLLECTION



#### CP-1 GOOD CROSS PEIN HAMMER

Michael Good's Cross Pein Hammer is a large jewelers' hammer with an arched head. The working surfaces are straight faces with curved edges. The reach is exceptional for work on Michael's signature complex forms.

FACE SIZE: 28mm x 9mm and 18mm x 3 mm

HEAD LENGTH: 148mm HANDLE LENGTH: 250mm



#### CP-2 GOOD CROSS PEIN HAMMER

The CP-2 hammer is the companion hammer to Michael Good's CP-1. It works with shapes that are between the large and small shapes that the CP-1 is used for.

FACE SIZE: 24mm x 4mm and 22mm x 3 mm

HEAD LENGTH: 148mm HANDLE LENGTH: 250mm



#### P-1 GOOD PLANISHING HAMMER

This is Michael Good's design for a planishing hammer with unique curves for working on complex curved hollow shapes. The cutaway portion of the hammer neck allows the craftsperson to see what is happening as the forming proceeds, and also allows the hammer to reach previously inaccessible areas.

FACE SIZES:

HEAD LENGTH: 20mm and 12.5 mm - HANDLE LENGTH: 250mm



## REVERE COLLECTION



#### **CHASING / RIVETING**

"Essential for jewelry making, this hammer combines two faces, which are used in different operations. The chasing face is used to strike tools only, not jewelry. Use it for center punches, chasing punches, etc. The surface is not maintained and will show marks and dings, which is fine because this tool is not used on jewelry metals themselves. The riveting face is a small cross peen. It is ideal for upsetting, or spreading the ends of rivets when cold-joining metals. This hammer needs no maintenance. It is required for classes at the Revere Academy of Jewelry Arts in San Francisco, California."

ALAN REVERE





#### GOLDSMITHING/CROSS PEEN

"This is my signature combination of two essential hammer faces. It is ideal for small forging projects. The cross peen is used to stretch metal in one direction when forging. The goldsmithing face is used for radial forging, moving metal outward in all directions, as well as planishing to remove marks left by the cross peen. Both faces can be used to produce attractive textures. There is no need to polish either end, just keep them tidy with Scotch Brite® or 220 sandpaper. Unless this hammer is the final tool to touch the work, there is no need to polish. This hammer is required for classes at the Revere Academy of Jewelry Arts in San Francisco, California."

ALAN REVERE



#### FRETZ HAMMER SETS

#### SET HMR-C CHASING HAMMERS SET



#### SET HMR-G MICHAEL GOOD HAMMERS



#### SET HMR-C Includes:

HMR-17 Chasing
Hammer
HMR-19 Janus Chasing
Hammer
HMR-20 Classic
Chasing HammerHeavy
HMR-417 Precisionsmith
Chasing Hammer
HMR-20-M Classic Chasing
Hammer - Chasing

#### SET HMR-G Includes:

CP-1 Cross Pein Hammer P-1 Planishing Hammer CP-2 Cross Pein Hammer



The first five hammers of each series are the most used of the Fretz Hammers. The only difference is the size of the hammers for the scale of the work. Jewelers should start with the HMR-1 thru 5 Set. Metalsmiths who forge and form heavy stock will pick up one of these larger hammers in the HMR-101 thru 105 Set. Those working on very small metal work will appreciate the scale of the HMR-401 thru 405 Set.



The three sizes are illustrated with the planishing hammers.

#### SET HMR-M MASTER JEWELRY FORMING



#### SET HMR-M Includes:

HMR-1 Planishing Hammer

HMR-2 Wide Raising Hammer

HMR-3 Narrow Raising Hammer
HMR-4 Large Embossing Hammer
HMR-5 Small Embossing Hammer
HMR-21 Goldsmithing Hammer
HMR-8 Rounded Narrow Raising
Hammer
HMR-9 Rounded Wide Raising
Hammer
HMR-20 Classic Chasing Hammer Heavy
HMR-20-M Classic Chasing Hammer Medium
HMR-7 Double Ended Insert Hammer

#### **SET HMR-T TEXTURE HAMMERS**



#### SET HMR-T Includes:

HMR-12 Sharp Texturing/Raising Hammer
HMR-14 Raw Silk
HMR-15 Circle Texturing Hammer
HMR-22 Sand Stone Hammer
HMR-406 Precisionsmith Riveting
/Texturing Hammer
HMR-412 Precisionsmith Sharp
Texturing Hammer
HMR-413 Precisionsmith Petite
Sharp Hammer

#### SET HMR-S SILVERSMITHING AND FORGING



#### SET HMR-S Includes:

HMR-101 Planishing Hammer HMR-102 Wide Raising Hammer HMR-102P Wide Rounded Planishing Hammer HMR-103 Narrow Raising Hammer HMR-104 Large Embossing Hammer SH-1 Jeweler's Sledge Hammer HMR-105 Small Embossing Hammer HMR-106 Blocking Hammer

#### SET HMR-PH MASTER PRECISIONSMITH HAMMERS SET



#### **SET HMR-PH Includes:**

Hammer
HMR-402 Precisionsmith Wide Raising
Hammer
HMR-403 Precisionsmith Narrow Raising
Hammer
HMR-404 Precisionsmith Large Embossing
Hammer
HMR-405 Precisionsmith Small Embossing
Hammer
HMR-406 Precisionsmith Riveting /Texturing
Hammer
HMR-408 Precisionsmith Rounded Narrow
Hammer
HMR-409 Precisionsmith Rounded Wide
Hammer
HMR-409 Precisionsmith Rounded Wide
Hammer

HMR-401 Precisionsmith Planishing

#### TOOLS

R-101 and R-102 "

### ALL FRETZ TOOLS ARE MADE FROM DURABLE HARDENED 420 STAINLESS STEEL TANG SIZES

The following have Small Tangs:
Hollow Ring Stakes R-1, R-2 and R-3
F- Stakes F-1 thru F-9
M-1- thru M-9
B-1 thru B-6
Large Tang Stakes and Holders are;
B-101
F-101
E-101

H-1 The H-1 Holder is the original holder for the Small Tang B (Bezel), M (Mushroom), F (Forming) Series Stakes and the H-2 Holder. The H-1 Holder can be mounted on a sturdy workbench or Wooden Block (VB-1) to use the holder in a vise. The advantage of this holder is that it doesn't extend far beyond the edge of the workbench. The H-1 Holder is supplied with socket head bolts and nuts. The H-1 Holder is not recommended for use with the M-100 Series Stakes.

H-1L The H-1L Holder is for the Small Tang B (Bezel), M (Mushroom), F (Forming) Series Stakes, the H-2 Holder and the M-10O Series Stakes. The H-1L Holder can be mounted on a sturdy workbench or Wooden Block (VB-1) to use the holder in a vise. The H-1L Holder is supplied with socket head bolts and nuts. This is an excellent choice for the M-10O Series Stakes.

H-2 The H-2 has a Small Tang that fits into the H-1, H-1L or the T-1O1 Holders and in turn holds the Micro Mandrels, Micro Stakes and Insert Wheels. The H-2 Holder makes working on very small hammer forming projects possible.



#### H-101

The H-101 holds the Large Tang 100 Series T-Stakes, BH-101 Blow horn Stake, T-101Holder and the E-101 Holder. The H-101 should be bolted to a sturdy workbench or a stump. The H-101 is supplied with 10mm socket head bolts and nuts.



#### VH-1

The VH-1 Stake Holder is used to hold the Small Tang Fretz Stakes in a vise. The small size of this holder makes it useful in small vises. The VH-1 Holder is not recommended for use with the M-100 Series Stakes.

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VH-1L The VH-1L Stake Holder is used to hold all the Small Tang Fretz Stakes in a vise. The tapered tang prevents the VH-1L from rotating in large vise jaws. This is a good choice for use with the M-100 Series Stakes.

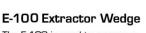


The VH-101 holds the Large Tang 100 Series T-Stakes, BH-101 Blow Horn Stake, T-101 Holder and the E-101 Holder. The VH-101 performs the same function as the H-101 but is used with a heavy machinist vise. Different Stakes and Holders can easily be removed with a ball peen hammer.



The E-101 fits a Large Tang Stake Holder, either the H-101 or the VH-101 Holder.

The E-101 extends the reach of the M-100 Series Mushroom Stakes by about 80 mm. This allows the mushroom stakes to reach deep into a project as when a bottom of a cylinder needs to be planished.



The E-100 is used to remove a mushroom stake from the E-101 Holder. Just drive the wedge into the oval hole and the taper on the wedge will force the inserted mushroom stake out.



The T-101 Stake holder has a large Tang which fits into the H-101 or the VH-101. The top holes on the T-101 hold the Small Tang Stakes. The T-101 allows a hollow project to slide over a mushroom stake with an 80 mm reach. The raised end of the T-101 makes it possible to form domed areas on small cylinders and sculptural shapes. The ability to rotate the T-101 makes it the first choice when using the M-100 Series Fluting Stakes.

#### FRETZ PORTABLE WORKBENCH



The Fretz Portable Workbench is a foldable workstation that can easily be moved from location to location. The top is solid ash hardwood with folding steel legs. The H-1 Holder or the H-1L Holder can be mounted to the predrilled holes on the front side of the bench.

Many projects demand two stakes and having two holders saves time in not having to change stakes repeatedly.

Set up is a simple matter of securing the legs to the workbench with four lag bolts.

Pilot holes on the bottom surface have been predrilled.

A 10 mm long socket with a socket wrench is the easiest way to secure the bolts.

The workbench top is 43 ¾ inches by 11 ½ inches by 1 ½ inches thick.

The workbench top weighs 18.4 pounds with shipping box.

The steel folding legs weigh 18.2 pounds with shipping box.

The Workbench is 26 inches high when set up and is adjustable upwards in four inch increments. The 26 inch height is perfect for most adults when sitting.

#### FRETZ PORTABLE TOOL RACK



The Fretz Portable Tool Rack is a foldable tool rack for Fretz Hammers and Stakes.

The top is solid hardwood ash and makes the perfect companion to the Fretz Portable Workbench. The stakes and hammers are easy to see and select. The length of the tool rack will accommodate a large Fretz tool collection.

The workbench top is 43 1/4 inches by 9 3/4 inches by 1 ½ inches thick.

The ash Fretz Portable Tool Rack top weighs 13.1 pounds with shipping box.

The steel folding legs weigh 18.2 pounds with shipping box.

The Fretz Portable Tool Rack is 26 inches high when set up and is adjustable upwards in four inch increments. The height can be matched to the Fretz Portable Workbench.

The Ash Wood Top is packaged in a cardboard box with three Styrofoam sleeves.

The steel legs are packaged in a cardboard box. Lag bolts and assembly instructions are included.

#### M-100 SERIES STAKES



M-101 High Dome Mushroom Stake / 35 mm Round



M-106 Small Concave Stake / 32 mm Long



M-110 Sloped Concave Cone Stake / 52 mm Long



M-102 Low Dome Mushroom Stake / 35 mm Round



M-106A Small Concave Closing Stake / 32 mm Long



M-111 40 mm Convex Cuff Stake / 36 mm Long



M-103 Flat Mushroom Stake / 35 mm Round



M-107 Extra Concave Cone Stake / 52 mm Long



M-112 30 mm Convex Cuff Stake / 36 mm Long



M-104 Large Concave Stake / 57 mm Long



M-108 Sloped Large Concave Stake / 52 mm Long



M-113 20 mm Convex Cuff Stake / 36 mm Long



M-105 Medium Concave Stake / 46 mm Long



M-109 Sloped Concave Cone Stake / 52 mm Long



M-113A 20 mm Starting Fluting Stake / 36 mm Long



M-113B 20 mm Finishing Fluting Stake / 36 mm Long



M-114 10 mm Convex Cuff Stake / 36 mm Long



M-115 Low Compound Curve Stake / 52 mm Long



M-116 High Compound Curve Stake / 52 mm Long



M-117 Flat Cuff Stake / 52 mm Long



M-118 Small Flat Cuff Stake / 52 mm Long



M-119 Large Spoon Stake / 52 mm Long



M-120 Medium Spoon Stake / 43 mm Long



M-121 Small Spoon Stake / 26 mm Long



M-122 Shallow Concave Stake / 59 mm Long



M-123 Minimal Concave Stake / 59 mm Long



M-124 Large Collar Mushroom Stake /44 mm



M-125 Large Concave Collar Mushroom Stake /46 mm Long



M-126 Medium Collar Mushroom Stake /49 mm Long



M-127 Small Collar Mushroom Stake / 38 mm Long



M-128 Wide Flat Doming Bracelet Stake / 1<sup>7/16</sup> or 36 mm



M-132B 50 mm Finishing Low Dome Fluting Stake. The final stake to use for fluting low domed bracelets or cylinders. Use the M-132B to sharpen the flutes formed with the M-132A Stake.



M-129 Narrow Flat Stake with Rolled Edge / 36 mm



M-130 Straight Fluting Stake / 2" or 50 mm



M-132A 50 mm Beginning Low Dome Fluting Stake. The first stake to use for fluting low domed bracelets or cylinders. Use the M-110 Stake for initial forming. This stake prevents misplaced sharp interior marks from forming during the early fluting process.



BH-101 Blow Horn Stake / 8" or 223 mm
The BH- 101 is based on a classic tinsmithing stake.
The shape is ideal for forging bracelets and cuffs. The
BH-1's weight makes it a good choice when thick stock
will be thinned or raised with various hammers.

#### MICHAEL GOOD STAKES



The G-1 and all Michael Good Stakes have a single curve for anticlastic forming. The single curve makes it possible for the jeweler to form complex forms without binding with the stake. The open form of this stake is often the first stake to begin with.

G-2 16mm/90 Degree Hook Stake The G-2 is a steeper curve for deeper anticlastic forms.

G-3 12mm/90 Degree Hook Stake
The G-3 is scaled for smaller work or as
a 'progressive stake" to begin closing
larger forms.

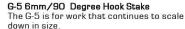


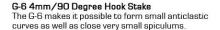
GH-1 Michael Good Holder for 16 mm Bar Stakes

The GH-1 holds the Michael Good Anticlastic Stakes in a vise. The Michael Good Stakes are held firmly with the set screw in the GH-1 Holder. The tapered tang keeps the holder from slipping forward in the vise.



anticlastic curves.





#### SET 101 100 SERIES MASTER SET







The metalsmith has the option of two mounting systems, the H-101 and the VH-101, for the Complete 100 Series Fretz Tools.

#### The Tool Holders

T-101 Double Ended Holder

The T-101 holds all the M-100 Series Mushroom Stakes so they may be used with projects requiring a deeper reach than is possible with the H-1L holder. This makes it possible to form very large jewelry and small hollowware with these tools. E-101 and E-100 Extender holder and Wedge Set

The E-101 is an extension holder that fits in either the H-101 or VB-101 Holders.

This extra length makes it possible to mount all the M-100 Series Mushroom Stakes so they can be used in a raised position. An example would be forming the bottom on a small bottle.

The E-100 is a wedge to help remove the M-100 Series Stakes from the E-101 Holder.

#### The "T" Stakes

BH-1 Blow Horm Stake / 6" or 223 mm B-101 Raising Stake 180 mm Long Tapered Raising Stake180 mm Long R-102

The R-101 and R-102 are used to raise flat metal into concave and convex shapes.

They are also useful in forging thick metal stock.

The BH-1 is a classic stake for forming and forging large and small circles.

The Mushroom Stakes M-101 High Dome Mushroom Stake /35 mm Round Low Dome Mushroom Stake /35 mm Round M-102 Low Dome Musincom Stake /35 mm Flat Mushroom Stake /35 mm Round Large Concave Stake /35 mm Long Medium Concave Stake /46 mm Long Small Concave Stake /32 mm Long Anticlastic Closing Stake M-103 M-104 M-105 M-106 M-106A M-107 Anticlastic closing Stake / 52 mm Long Sloped Large Cone Stake / 52 mm Long Sloped Concave Cone Stake / 52 mm Long Sloped Concave Cone Stake / 52 mm Long M-108 M-109 M-110 Sloped Convex Cone Stake /52 mm Long M-111 40 mm Convex Cuff Stake /36 mm Long M-112 30 mm Convex Cuff Stake /36 mm Long M-113 20mm Convex Cuff Stake /36 mm Long

M-113A M-113B

Starting Fluting Stake
Finishing Fluting Stake
Finishing Fluting Stake
10mm Convex Cuff Stake /36 mm Long
Low Compound Curve Stake /52 mm Long M-114 M-115 M-116 High Compound Curve Stake / 52 mm Long

M-117 Flat Cuff Stake /52mm Long Small Flat Cuff Stake/52mm Long

M-118 Large Spoon M-119

M-120 Medium Spoon M-121 Small Spoon

M-122 Shallow Concave Stake

Minimal Concave Stake M-123

M-124 Large Collar Mushroom Stake / 44 mm

M-125 Large Concave Collar Mushroom Stake / 46 mm Long Medium Collar Mushroom Stake / 49 mm Long M-126

M-127 Small Collar Mushroom Stake / 38 mm Long

Wide flat Doming Bracelet stake / 1 7/16" or 36 mm M-128

M-129 Narrow flat Stake with Rolled Edge / 36 mm

Straight Flutting Stake/2" or 50 mm M-130 M-132A Starting Low Dome Fluting Stake

M-132B

Finishing Low Dome Fluting Stake

The M-100 Stakes are used for forming metal while held in the T-101 or H-1L Holders. The various shapes lend themselves for forming and texturing flat, concave, convex and compound curves.

S-3 Wooden Stake Rack 12" x 5" (3 pcs)

#### SET 103 JEWELERS BRACELET 100 SERIES SET



#### **SET 104 SPOON FORMING SET**



#### SET 104 Includes:

M-119 Large Spoon M-121 Small Spoon M-120 Medium Spoon This set is useful for making flat, concave and convex cuff and bangle bracelets. The reach of the H-1L Holder is longer than the original H-1 Holder and is needed for the M-100 Series Stakes.

The H-1L is a good choice for jewelers where the extra reach of the T-101 is not needed.

#### SET 103 Includes:

H-1L	Long Holder with Hardware
M-104	Large Concave Stake/57 mm Long
M-105	Medium Concave Stake /46 mm Long
M-106	Small Concave Stake /32 mm Long
M-107	Extra Small Concave Stake /52 mm Long
M-122	Shallow Concave Stake
M-123	Minimal Concave Stake

M-104 thru M-107, M-122 and M-123 Mushroom Stakes are useful for forming concave shapes and diameters of two inches and up. These stakes are for sinking round sheet metal tubes and flat sheet

M-111	40 mm Convex Cuff Stake /36 mm Long
M-112	30 mm Convex Cuff Stake /36 mm Long
M-113	20mm Convex Cuff Stake /36 mm Long
M-114	10mm Convex Cuff Stake /36 mm Long

The M-111 thru M-114 Mushroom Stakes are useful for forming various convex shapes with round diameters of two inches and up. The raising process of compressing the edge of a cylinder is the main function though they are very useful for doming various shapes as well.

M-117 Flat Cuff Stake /52mm Long M-118 Small Flat Cuff Stake/52mm Long

The M-117 and M-118 Flat Cuff Mushroom Stakes are used to form and texture round flat bracelets. The stakes can be used to form concave cylinder shapes while tilting and rotating the shapes as they are being hammered.

S-3 Double Wooden Stake Rack 12" x 5"

#### **EXTENDED HOLDER AND WEDGE SET**



#### **SET Includes:**

E-100 Extender Wedge E-101 Extender Holder

#### **BEZEL STAKES**

The Bezel Stakes have six different surface curves so different shaped bezels can be formed easily.



B-1 Bezel Sharp Edge Flat Stake 80 x 11.5mm



B-2 Bezel Sharp Edge Low Dome Stake 80 x 11.5mm



B-3 Bezel Sharp Edge High Dome Stake 80 x 11.5mm



B-4 Bezel Sharp Edge Trillion Stake 80 x 11.5mm



B-5 Bezel Rolled Edge Flat Stake 80 x 11.5mm



B-6 Bezel Rolled Edge Dome Stake 80 x 11.5mm

#### FORMING STAKES

The F- Series Stakes are miniature silversmithing stakes for jewelers.



F-1 Beak Stake 82 x 13.25 mm



F-2 Double Convex Stake 75 x 14.5 mm



F-3 Doming Stake 78 x 12.5 mm



F-4 Cone Stake 89 x 15 mm



F-5 Hoop Forming Stake 80 x 17.5 and 13.5 mm



F-6 Shell Stake 97 x 15 mm



F-7 Thin Shell Stake 94 x 14 mm



F-8 Horn Stake 73 x14 mm



PLANISHING ON THE F-2 STAKE



F-9 Convex/Concave Stake 77 x 13 mm

#### **HOLLOW RING STAKES**

Hollow Ring Stakes are for forming rings from sheet metal blanks into interesting designs.



R-1 Standard Raising Stake 83 x 11.5mm



R-2 Tapered Rounded Raising Stake 83 x 11.5mm



R-3 Rounded Raising Stake 83 x 11.5mm

#### THE PROGRESSIVE STAKES

The Progressive Stakes are used after a piece is formed with the F-2 Doming Stake. The F-2A is the first stake to follow in the progression to form concave flutes. This stake establishes concave curves without making the flutes sharp. The next two stakes, F-2B and F-2C bring the high points into sharper relief.



F-2A Convex Fluting Rolled Edge 75 x 14.5 mm



F-2B Convex Fluting Medium/Sharp 75 x 14.5 mm



F-2C Convex Fluting Sharp 75 x 14.5 mm

#### **MUSHROOM STAKES**

The Mushroom Stakes have different curves and sizes to form sheet metal into interesting shapes.



M-1 Mushroom Flat Stake (14mm)



M-2 Mushroom Low Dome Stake (14mm)



M-3 Mushroom High Dome Stake (14mm)



M-4 Mushroom Flat Stake (10mm)



M-5 Mushroom Low Dome Stake (10mm)



M-6 Mushroom High Dome Stake ((10mm)



M-7 Mushroom Flat Stake (18mm)



M-8 Mushroom Low Dome Stake (18mm))



M-9 Mushroom High Dome (18mm)

#### **BENCH ANVILS**



Bench Anvils are large mushroom stakes for the jeweler's bench . You can form or texture flat or curved jewelry and metal on these stakes. The wooden bases dampen the noise and the rubber feet keep the anvil from slipping.

#### H-2 HOLDER INSERT STAKES

All the Fretz Stakes that fit the H-2 Holder have 5mm tangs. The Insert Stakes are held with two set screws and make forming very small parts with various hammers easy.



A-1 3mm Micro-Mushroom Stake A-2 4mm Micro-Mushroom Stake A-3 5mm Micro-Mushroom Stake



AT-1 Tapered Micro Mandrel 3 1/4" Long 2mm-4mm and 3mm-5mm

AT-2 Gradual Tapered Micro Mandrel 3 1/4" Long 3mm-4mm and 4mm-5mm

AT-3 Straight Micro Mandrel 3 1/4" Long 5mm and 4mm

AT-4 Straight 5mm Micro Mandrel 3 1/4"



I-1 4.7mm Round High Dome Insert



I-2 5.7mm Round High Dome Insert



I-3 6.5mm Round High Dome Insert



I-4 8.5mm Round High Dome Insert



I-5 10.5mm Round High Dome Insert



I-6 12mm Low Dome Mushroom Insert



I-7 14.6mm Low Dome Mushroom Insert



I-8 16.7mm Low Dome Mushroom Insert



I-9 37 mm Tall 3x10.5mm Taper Insert



I-10 35 mm Tall 4 x 13.8 mm Taper Insert



I-11 21 mm Tall 3x 19 mm Taper Insert



I-1 2 17.5 mm Tall 4mm x 29.5 Concave Taper



I-13 32 mm Tall 4mm x 24 mm Concave Taper



I-14 6 mm Hook

#### H-2 INSERT WHEELS

The Insert Wheels form thin to thick convex shape earrings, rings and other curved forms.



I-15 10 mm x 3mm Wheel on 5 mm Shank



I-16 10 mm x 5 mm Wheel on 5 mm Shank



I-17 13 mm x 3 mm Wheel on 5 mm Shank



I-18 13 mm x 5 mm Wheel on 5 mm Shank



I-19 16 mm x 5 mm Wheel on 5 mm Shank



I-20 16 mm x 8 mm Wheel on 5 mm Shank



I-21 19 mm x 5 mm Wheel on 5 mm Shank



I-22 19 mm x 8 mm Wheel on 5 mm Shank

#### MA MUSHROOM SERIES STAKES

The MA-Series are round mushroom stakes of about 70 mm diameter in 420 hardened stainless steel.

The tapered tangs fit in the Fretz H-101 Bench Holder or Fretz VH-101 Vise Holder.

The design of each of the four stakes makes them very useful for forming or forging non-ferrous metal projects or jewelry. They are rugged tools that can be used with either light or very heavy hammers.



MA-1 Large Mushroom Anvil -Flat



MA-2 Large Mushroom Anvil -Low Dome



MA-3 Large Mushroom Anvil -Medium Dome



MA-4 Large Mushroom Anvil -High Dome

#### MA MUSHROOM ANVIL SET

MA-1 is the flat version of the MA-Series. It can be used as a flat jewelry anvil or also as a stake to form the bottom of hollowware. This is a very useful first stake for forging heavy stock metal wire or ingots.

MA-2 is a low domed round mushroom stake. The low dome makes an excellent curve for forming large pendants and for small projects to give the shape dimensional stability. Slightly domed shapes look less static than flat ones with fewer tendencies to bend in use.

MA-3 is a more domed round stake than MA-2. This stake can be used to form shapes when more of a domed surface is required. The MA-3 Mushroom Stake can be used as a mallet to dome metal. Lay sheet metal on a sand bag and strike it with the domed surface, while holding the tang, and the metal will become cupped in a few blows. The metal can then be forged or textured with various hammers by replacing it in it holder.



MA-4 is a half round domed mushroom stake. This shape is very useful for dramatic curves on large surfaces. On small surfaces the half round shape is needed to make the piece have a noticeable curve. Small round or freeform shapes can be raised on the surface with a nylon or steel-raising hammer. This technique is more efficient than angle raising metal.

#### STAKE SETS



#### Set #1 Bezel Forming Set

The Fretz Stake Set #1 is ideal for making bezels when bezel mandrels do not fit the stone. The six stakes all have different curves and edges that allow the craftsperson to match the stone's curve with that of the miniature stake to make forming easy. The sharp corners of triangles, rectangles and other bezel shapes can be hammered in without mitering. All the stakes fit into an H-1 holder so both hands are free to hammer and hold the project.

The H-1 Holder may be mounted on a workbench, or on the VB-1 Wooden Block that is then placed in a vise.

#### Set 1

Bezel Forming Set

#### Set Includes:

- Stake Holder With Hardware
- Bezel Sharp Edge Flat Stake
- Bezel Sharp Edge Low Dome Stake
- Bezel Sharp Edge High Dome Stake
  Bezel Sharp Edge Trillion Stake
  Bezel Rolled Edge Flat Stake
  Bezel Rolled Edge Dome Stake
  Wooden Stake Rack 83/4"x5"
- B-4
- B-5
- B-6
- VB-1 Wooden Vise Block and Hardware

#### Set#2 Deluxe Bezel Forming Set



Deluxe Bezel Forming

#### Set Includes:

- Stake Holder With Hardware

- Stake Holder With Hardware
  Bezel Sharp Edge Flat Stake
  Bezel Sharp Edge Low Dome Stake
  Bezel Sharp Edge High Dome Stake
  Bezel Sharp Edge Trillion Stake
  Bezel Rolled Edge Flat Stake
  Bezel Rolled Edge Dome Stake
  Mushroom Flat Stake (14mm)
  Mushroom Low Dome Stake (14mm)
  Mushroom High Dome Stake (14mm) B-3
- B-4 B-5
- B-6
- M-1
- Mushroom High Dome Stake (14mm) Standard Raising Stake M-3
- R-1 S-1
- Wooden Stake Rack
- VB-1 Wooden Vise Block and Hardware





#### Set #3 H-2 Micro Stake Set

The Fretz Set #3 is a group of very small mandrels that fit into the H-2 Holder. The various mandrels make it possible to form very tight curves on bezels and other small shapes where the Bezel Stakes are not curved . The Micro Mushroom Stakes allow the bezels to be domed if desired. Two H-1 Holders are useful when forming a bezel with more than one stake.

#### Set - 3

H-2 Micro Stake Set

#### Set Includes:

H-1 Stake Holder and Hardware

H-2 Micro Stake and Mandrel Holder

A-1 thru A-3 Micro Mushroom Stakes as a Set

AT-1,2,3 and 4 Micro Mandrels as a Set

S-2 Wooden Micro Stake Holder for H-2

VB-1 Vise Block with Hardware



#### Set # 4 Bezel and Micro Stake Set Complete

The Fretz Set #4 is a combination of Set #1 and #3 without the Mushroom Stakes. This is the ideal Set if bezel making is the main focus of your work. At a later date another H-1 Holder may be added as multiple stakes are routinely used on one

#### Set-4

Bezel and Micro Stake Set Complete

#### Set Includes:

Stake Holder and Hardware

Micro Stake and Mandrel Holder

thru A-3 micro mushroom stakes as a Set

AT-1,2,3 and 4 micro madrels as a Set

Bezel Sharp Edge Flat Stake

Bezel Sharp Edge Low Dome Stake Bezel Sharp Edge High Dome Stake Bezel Sharp Edge High Dome Stake Bezel Sharp Edge Trillion Stake B-2

B-3

B-4

B-5 Bezel Rolled Edge Flat Stake

Bezel Rolled Edge Dome Stake

S-1 Wooden Stake Rack 83/4"x5"

S-2 Wooden Micro Stake Holder for H-2

VB-1 Vise Block with Hardware



#### Set #5 Forming Stake Set

The Fretz Stake Set #5 is a group of stakes used for metal forming. They are similar to silversmithing stakes, but on a jewelry scale, and they fit into the H-1 holder. There are seven stakes for working sheet metal into convex and concave shapes. The starting sheet metal blank can be worked with one or more stakes into infinite possibilities. The H-1 Holder can be mounted on a workbench or on the VB-1 Wooden Block that is then placed in a vise.

#### Set - 5

Forming Stake Set

#### Set Includes:

- Stake Holder with Hardware H-1
- F-1 Beak Stake
- F-2 Double Convex Stake
- F-3 Doming Stake
- F-6 Shell Stake
- F-7 Thin Shell Stake
- F-8 Horn Stake
- F-9 Convex/Concave Stake
- Wooden Stake Rack 83/4"x5" S-1
- VB-1 Wooden Vise Block with Hardware



#### Set #6 Mushroom Stake Set

The Fretz Stake Set #6 has nine round Mushroom Stakes [M-1 thru M-9] of three different sizes. The shapes are flat, low dome and half round in 10mm, 14mm and 18 mm sizes. The Fretz mushroom Stakes also fit the H-1 Holder and can be used to dome sheet metal into different curves. The H-1 Holder may be mounted on a workbench or on the VB-1 Wooden Block that is then placed in a vise.

#### Set - 6

Mushroom Stake Kit

#### Set Includes:

- Stake Holder with Hardware
- M-1
- M-2
- Mushroom Flat Stake (14mm)
  Mushroom Low Dome Stake (14mm)
  Mushroom High Dome Stake (14mm)
  Mushroom Flat Rolled Edge Stake (10mm) M-3 M-4
- M-5
- Mushroom Low Dome Stake (10mm)
  Mushroom High Dome Stake (10mm)
  Mushroom Flat Rolled Edge Stake (18mm)
  Mushroom Low Dome Stake (18mm) M-6 M-7
- M-8
- Mushroom High Dome (18mm) Wooden Stake Rack 83/4"x5 M-9
- S-1
- VB-1 Wooden Vise Block with Hardware





#### Set #7 Hollow Ring Stake Set

The Fretz Stake Set #7 has three different T-Stakes (R-1,R-2 and R-3) for forming a ring blank into dimensional shapes. There is also a Forming Stake (F-8) for doming the ring shanks. All of these Fretz Stakes fit into the H-1 Holder. The H-1 Holder may be mounted on a workbench or on the VB-1 Wooden Block that is then placed in a vise.

#### Set - 7

Hollow Ring Stake Kit

#### Set includes:

H-1 Stake Holder with Hardware

R-1 Standard Raising Stake

R-2 Tapered Rounded Raising Stake

R-3 Rounded Raising Stake

F-8 Horn Stake

VB-1 Wooden Vise Block with Hardware

#### Set #8 Master Stake Set

The Master Stake Set gives the craftsperson the ability to use all the basic tools of the Fretz Miniature Stakes. The Master Set also comes with one H - 1 and one H - 1L Stake holders. This set has all the Fretz Miniature Stakes and Holders with the exceptions of the F-4 Cone Stake and the F-5 Hoop Stake, I-Series Insert Stakes and Wheels. The B-Stakes make it possible to form difficult bezels easy. The H-2 Holder adds the use of small mandrels and insert stakes. The M-Stakes or mushroom stakes make it easy to dome flatsheet metal shapes into complex forms. The R-Stakes are used to make hollow rings with stakes that fit a variety of designs. For the master craftsperson this is the set to consider. All of the Fretz Stakes fit into the H-1 or H-1L Holders. The Holders may be mounted on a workbech or on th VB-1 Wooden Block that is then placed in a vise.

Set Ind H-1 ar B-1 B-2 B-3 B-4 B-5 B-6 M-1 M-2 M-3 M-4	Stake Set    Stake Set     Stake Set     Stake Sezel Sharp Edge Flat Stake Sezel Sharp Edge Flat Stake Sezel Sharp Edge Low Dome Stake Sezel Sharp Edge High Dome Stake Sezel Sharp Edge Frillion Stake Sezel Sharp Edge Frillion Stake Sezel Rolled Edge Flat Stake Sezel Rolled Edge Flat Stake Sezel Rolled Edge Dome Stake Mushroom Flat Stake (14mm) Mushroom Low Dome Stake (14mm) Mushroom High Dome Stake (14mm) Mushroom Flat Rolled Edge Stake (10mm)	A-1	Mushroom High Dome (18mm) Standard Raising Stake Tapered Rounded Raising Stake Rounded Raising Stake Beak Stake Double Convex Stake Doming Stake Shell Stake Thin Shell Stake Horn Stake Convex/Concave Stake 5mm Accessory Tool Holder tories for H-2 Tool Holder: thru 3 Micro Stake Set
M-4	Mushroom Flat Rolled Edge Stake (10mm)	A-1	thru 3 Micro Stake Set
M-5	Mushroom Low Dome Stake (10mm)	AT-1	thru At-4 Mandrel Set
M-6	Mushroom High Dome Stake (10mm)	S-2	Wooden Micro Stake Holder for H-2
M-7	Mushroom Flat Rolled Edge Stake (18mm)	S-3	Wooden Stake Rack12"x5"
M-8	Mushroom Low Dome Stake (18mm)	VB-1	Wooden Vise Block with Hardware



#### Set#9 PROGRESSIVE STAKE SET

The Fretz Set #9 is a group of three stakes that are used after a piece has been formed with the F-2 Doming Stake. The F-2A, F-2B and the F-2C are used in "progression", one after the other to form concave flutes.

#### Set - 9 Includes:

Convex Fluting Stake/Lining Convex Fluting Stake/Sharp Convex Fluting Stake/Extreme Sharp



#### Set #10 H-2 INSERT STAKES

The Fretz #10 Set is a group of very small stakes that fit into the H-2 Holder. It is assumed that you already have the H-1 Holder and H-2 Holder. The mushroom stakes can be placed in the H-2' s top hole to be used as mushroom stakes or in the side holes are to be used as small forming stakes.

#### Set # 10 Includes:

- I-1 I-2 I-3 I-4 I-5 I-6 I-7

- i-8
- 1-9
- I-10

- 4.7 mm Round High Dome Insert
  5.7 mm Round High Dome Insert
  6.5 mm Round High Dome Insert
  8.5 mm Round High Dome Insert
  10.5 mm Round High Dome Insert
  12 mm Low Dome Mushroom Insert
  14.6 Low Dome Mushroom Insert
  16.7 Low Dome Mushroom Insert
  37 mm Tall x 3x10.5 mm Taper Insert
  35 mm Tall x 4 x 13.8 mm Taper Insert
  21 mm Tall x 3x 19 mm Taper Insert
  17.5 mm Tall x 4mm x29.5 Concave Taper
  32 mm Tall x 4mm to 24 mm Concave Taper
  6 mm Hook
- 1-14



#### Set #11 COMPLETE INSERT SET

The Fretz Stake Set #11 is when you want a complete jewelry forming stake set for very small work. It comes with almost all the parts for the H-2 Holder Stakes and the H-1 to mount on a workbench or in a vise. The Wheel Insert Stakes in Set #12 are not part of this set.

#### Set # 11 Includes:

Set #	F 11 Includes:
H-1	Stake Holder and Hardware
H-2	5mm Accessory Tool Holder
A-1	thru A-3 as a Set/ Miniature Stakes
AT-1,	2,3 and 4 as a Set/Miniature Mandrels
S-2	Wooden Micro Stake Holder for H-2
VB-1	Wooden Vise Block and Hardware
	(I-Series Set- Below)
I-1	4.7 mm Round High Dome Insert
1-2	5.7 mm Round High Dome Insert
1-3	6.5 mm Round High Dome Insert
1-4	8.5 mm Round High Dome Insert
1-5	10.5 mm Round High Dome Insert
1-6	12 mm Low Dome Mushroom Insert
1-7	14.6 Low Dome Mushroom Insert

8.5 mm Round High Dome Insert 10.5 mm Round High Dome Insert 12 mm Low Dome Mushroom Insert 14.6 Low Dome Mushroom Insert



#### Set# 12 MINI WHEEL STAKE SET

The Fretz Stake Set #12 is a special group of Insert Stakes for the H-2 Holder. The wide selection of wheel sizes make it easy to dome flat rings or short lengths of tubing into domed shapes.

#### Set # 12 Includes:

I-15	10 mm x 3 mm Wheel on 5 mm Shank
I-16	10 mm x 5 mm Wheel on 5 mm Shank
I-17	13 mm x 3 mm Wheel on 5 mm Shank
I-18	13 mm x 5 mm Wheel on 5 mm Shank
I-19	16 mm x 5 mm Wheel on 5 mm Shank
1-20	16 mm x 8 mm Wheel on 5 mm Shank
I-21	19 mm x 5 mm Wheel on 5 mm Shank
1-22	19 mm x 8 mm Wheel on 5 mm Shank
S-2	Wooden Micro Stake Holder for H-2 Holder

## **WOODEN STANDS AND HOLDERS**









S-1 Wooden Stake Rack 83/4"x5"

S-2 Wooden Micro Stake Holder 6"x3"x1" for H-2

S-3 Wooden Stake Rack 12"x5"

VB-1 Wooden Vise Block 3"x2"x1 1/2"

### SET DVD # 1 AND FRETZ TOOLS



#### SET DVD # 1 Includes:

**DVD** # 1

#### BASIC HAMMERING AND FORMING JEWELRY CUFF BRACELETS.

Fretz Tools.

#### Fretz Stakes:

#### SET DVD # 2 AND FRETZ TOOLS



#### SET DVD # 2 Includes:

#### **DVD** #2

# **HAMMERING AND FORMING JEWELRY PENDANTS** Fretz Tools

#### Fretz Stakes :

H-1	Stake Holder for Work Bench Mounting	
M-8	Mushroom Low Dome Stake (18mm)	Fretz Hammers:
F-7	Thin Shell Stake	HMR-1 Planishing Hammer
I-8	16.7 Low Dome Mushroom Insert	HMR-3 Narrow Raising Hammer
I-14	6 mm Hook	HMR-4 Large Embossing Hammer
H-2	5 mm Accessory Tool Holder	HMR-5 Small Embossing Hammer
S-1 V	Vooden Stake Rack 83/4"x5" (Not shown)	HMR-7 Double Ended Insert Hamme



#### SET DVD # 3 Includes :

#### **DVD** #3

#### EXPERT BEZEL FORMING

#### Fretz Stakes:

H-1 Stake Holder for Work Bench Mounting

H-2

5mm Accessory Tool Holder Bezel Sharp Edge Flat Stake Bezel Sharp Edge High Dome Stake Bezel Sharp Edge Trillion Stake

Bezel Rolled Edge Dome Stake AT-1,2,3 and 4 as a Set/Miniature Mandrels

R-1 Raising Stake

R-2 Tapered Rounded Raising Stake

R-3 Rounded Raising Stake

Wooden Stake Rack 8 3/4"x5" (Not shown) HMR-7 Double Ended Insert Hammer

#### Fretz Hammers:

HMR-1 Planishing Hammer HMR-3 Narrow Raising Hammer

#### SET DVD # 4 AND FRETZ TOOLS



#### SET DVD # 4 Includes:

#### **DVD**#4

#### FORMING HOLLOW RINGS

#### Fretz Tools

#### Fretz Stakes:

Stakes:
Stake Holder for Work Bench Mounting
Standard Raising Stake
Tapered Rounded Raising Stake
Rounded Raising Stake
Ring/Hoop Doming Stake
Shell Stake
Thin Shell Stake

H-1 Stake Holder for Work Bench Mounting
H-1 Stake Holder for Work Bench Mounting
H-2 Standard Raising Stake
H-2 Tapered Rounded Raising Stake
H-3 Rounded Raising Stake
H-4 HMR-2 Wide Raising Hammer
H-5 Ring/Hoop Doming Stake
H-5 Ring/Hoop Doming Stake
H-6 Shell Stake
H-7 Thin Shell Stake
H-7 Thin Shell Stake
H-7 Horn Stake
H-7 Horn Stake
H-7 Horn Stake
H-7 HMR-1 Sharp Texturing/Raising Hammer
H-7 HMR-1 Sharp Texturing/Raising Hammer
H-8 Horn Stake
H-8 Horn Stake
H-9 Hanishing Hammer
H-1 Planishing Hammer
H-1 Vide Raising Hammer
H-1 Vide Raising Hammer
H-1 HMR-2 Sharp Texturing/Raising Hammer
H-1 Stake
H-1 HMR-1 HMR-2 Sharp Texturing/Raising Hammer
H-1 Stake H-1 HMR-1 Planishing Hammer
H-1 Stake H-1 HMR-2 Sharp Texturing/Raising Hammer
H-9 HMR-1 HMR-1 Planishing Hammer
H-1 Stake H-1 HMR-2 Sharp Texturing/Raising Hammer
H-1 Stake Holder for Work Bench Mounting
H-1 Stake H-1 HMR-1 Planishing Hammer
H-1 HMR-1 HMR-2 Sharp Texturing/Raising Hammer
H-1 Stake H-1 HMR-1 HMR-2 Sharp Texturing/Raising Hammer

#### SET DVD # 1, 2 ADD FRETZ TOOLS



#### SET DVD # 1,2 Includes:

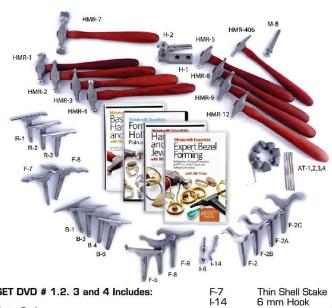
#### Fretz Stakes:

H-1 H-2 F-2A F-2B F-3C F-7 F-7 F-9-8 I-14 I-8 S-1	Stake Holder for Work Bench Mounting 5mm Accessory Tool Holder Double Convex Stake Convex Fluting Stake/Lining Convex Fluting Stake/Sharp Convex Fluting Stake/Extreme Sharp Shell Stake Thin Shell Stake Convex/ Concave Stake Mushroom Low Dome Stake (18 mm) 6 mm Hook 16.7 Low Dome Mushroom Insert Wooden Stake Rack 8 %"x5" ( Not show)	HMR-7 HMR-8 HMR-9 DVD1: DVD2:	Small Embossing Hammer Double Ended Insert Hammer Rounded Narrow Raising Hammer Rounded Wide Raising Hammer Basic Hammering and Forming Hammering and Forming Jewelry, \(^1\)	Volume 2.
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#### Fretz Hammers:

HMR-1	Planishing Hammer		
HMR-2	Wide Raising Hammer		
HMR-3	Narrow Raising Hammer		
HMR-4	Large Embossing hammer		

#### SET DVD # 1, 2, 3, 4 AND FRETZ TOOLS



#### SET DVD # 1.2. 3 and 4 Includes:

F-8 Horn Stake
F-9 Convex/ Concave Stake
I-8 16.7 Low Dome Mushroom Insert
I-2 5mm Accessory Tool Holder
R-2 Tapered Rounded Raising Stake
B-1 Bezel Sharp Edge Flat Stake
B-2 Bezel Sharp Edge Trillion Stake
F-2 Double Convex Stake
F-2B Convex Fluting Stake/Sharp
F-5 Ring/ Hoop Doming Stake

#### Fret

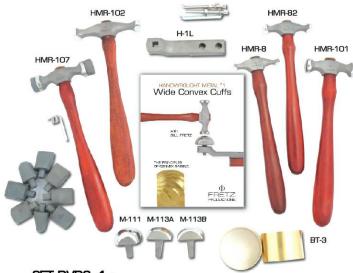
Fretz Stakes:		M-8	Mushroom Low Dome Stake (18 mm)	
	H-1 R-1	0014/ 1 0 1 0 1 0 1 0 7		
		Rounded Raising Stake Bezel Sharp Edge High Dome Stake	Fretz Hammers:	
	B-6	Bezel Rolled Edge Dome Stake	HMR-1	Planishing Hammer
	F-2A	Convex Fluting Stake/Lining	HMR-2	Wide Raising Hammer
	F-2C	Convex Fluting Stake/Extreme Sharp	HMR-3	Narrow Rasing Hammer
	F-6	Shell Stake	HMR-4	Large Embossing hammer
	F-8	Horn Stake	HMR-5	Small Embossing Hammer

HMR-1	Planishing Hammer
HMR-2	Wide Raising Hammer
HMR-3	Narrow Rasing Hammer
HMR-4	Large Embossing hammer
HMR-5	Small Embossing Hammer
HMR-7	Double Ended Insert Hammer
HMR-8	Rounded Narrow Raising Hammer
HMR-9	Rounded Wide Raising Hammer
HMR-12	
	Precisionsmith Riveting/Texturing Hammer
DVD1:	Hammering and Forming

Hammering and Forming, Volume 2
Expert Bezel Forming
Forming Hollow Rings DVD2:

DVD3: DVD4:

#### DVDS-1 WIDE CONVEX CUFF DVDS TOOL SET



### SET DVDS -1:

#### **DVD** WIDE CONCAVE CUFF

BT-3 Brass Blanks 57.15x38mm (2 1/4x1 1/2")

#### Fretz Hammers:

HMR-2 Wide Raising Hammer

HMR-107 Large Insert Hammer

HMR-8 Rounded Narrow Raising Hammer

HMR-101 Planishing Hammer

HMR-102 Wide Raising Hammer

#### Fretz Tools:

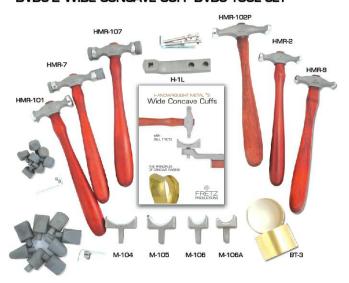
H-1L Long Holder with Hardware

M-111 40 mm Convex Cuff Stake

M-113A Starting Fluting Stake

M-113B Finishing Fluting Stake

#### DVDS-2 WIDE CONCAVE CUFF DVDS TOOL SET



### SET DVDS - 2:

#### DVD WIDE CONCAVE CUFF

BT-3 Brass Blanks 57.15x38mm (2 1/4x1 1/2")

#### Fretz Hammers:

HMR-2 Wide Raising Hammer

HMR-7 Double Ended Insert Hammer

HMR-9 Rounded Wide Raising Hammer

HMR-101 Planishing Hammer

HMR-102P Wide Raising Hammer

HMR-107 Large Insert Hammer

#### Fretz Tools:

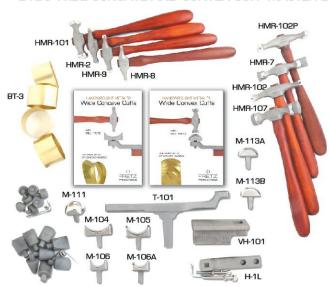
H-1L Long Holder with Hardware M-104 Large Concave Stake

M-105 Medium Concave Stake

M-106 Small Concave Stake

M-106A Small Concave Closing Stake

#### DVDS WIDE CONCAVE AND CONVEX CUFF MASTER DVDS TOOL SET



# SET DVDS - 3 Includes: DVD WIDE CONVEX CUFF DVD WIDE CONCAVE CUFF

BT-3 Brass Blanks 57.15x38mm (2 1/4x1 1/2") 4 Pieces

#### Fretz Hammers:

HMR-2 Wide Raising Hammer HMR-7 Double Ended Insert Hammer HMR-8 Rounded Narrow Raising Hammer HMR-9 Rounded Wide Raising Hammer HMR-101 Planishing Hammer HMR-102 Wide Raising Hammer HMR-102P Wide Planishing Hammer HMR-107 Large Insert Hammer Fretz Tools:

H-1L Long Holder with Hardware
M-104 Large Concave Stake
M-105 Medium Concave Stake
M-106 Small Concave Stake
M-106 A Small Concave Closing Stake.
M-111 40 mm Convex Cuff Stake
M-113A Starting Fluting Stake
M-113B Finishing Fluting Stake
T-101 Tool holder

#### TEXTURE DVD TOOLS SET



# SET HAMMER TEXTURE DVD Includes: DVD HAMMER TEXTURE AND FORM

BT-3 Brass Blanks 57.15x38mm (2 1/4x1 1/2")

#### Fretz Hammers:

HMR-12 Sharp Texturing / Raising Hammer

HMR-14 Raw Silk Hammer

HMR-15 Circle Texturing Hammer

HMR-22 Cross Hatch Hammer

HMR-406 Precisionsmith Riveting / Texturing Hammer

HMR-412 Precisionsmith Sharp Texturing Hammer.

HMR-413 Precisionsmith Petite Sharp Texturing Hammer.

Fretz Tools:

BA-1 Bench Anvil - Flat (71 mm)

BA-2 Bench Anvil - Low Dome (71 mm)

BA-3 Bench Anvil - Medium Dome (71 mm)

BA-4 Bench Anvil - High Dome (71 mm)

#### MALLEABLE BRASS

BT-1



Dimension : 57.15x16mm (2 1/4x5/8") x1 Thickness: 18 gauge, .040 inches or . 81mm

BT-4



Dimension : 50.8x16mm (2x5/8") x1Thickness: 18 gauge, .040 inches or . 81mm BT-7



Dimension 31.75x13mm (1 1/4x1/2") x3 Thickness: 18 gauge, .040 inches or . 81mm BT-10



Dimension 25.4x10mm (1x3/8") x3 Thickness: 18 gauge, .040 inches or . 81mm

BT-2



Dimension: 57.15x22mm (2 1/4x7/8") x1 Thickness: 18 gauge, .040 inches or . 81mm BT-5



Dimension: 50.8x22mm (2x7/8") x1 Thickness: 18 gauge, .040 inches or .81mm **BT-8** 



Dimension: 31.75x10mm (1 1/4x3/8") x3 Thickness: 18 gauge, .040 inches or . 81mm BT-11



Dimension: 57.15x88.9mm (2 1/4x3 1/2") x1unit Thickness: 18 gauge, .040 inches or . 81mm

**BT-3** 



Dimension: 57.15x38mm (2 1/4x1 1/2") x1 Thickness: 18 gauge, .040 inches or . 81mm BT-6



Dimension : 50.8x38mm ( $2x1\ 1/2$ ") x1 Thickness: 18 gauge, .040 inches or . 81mm

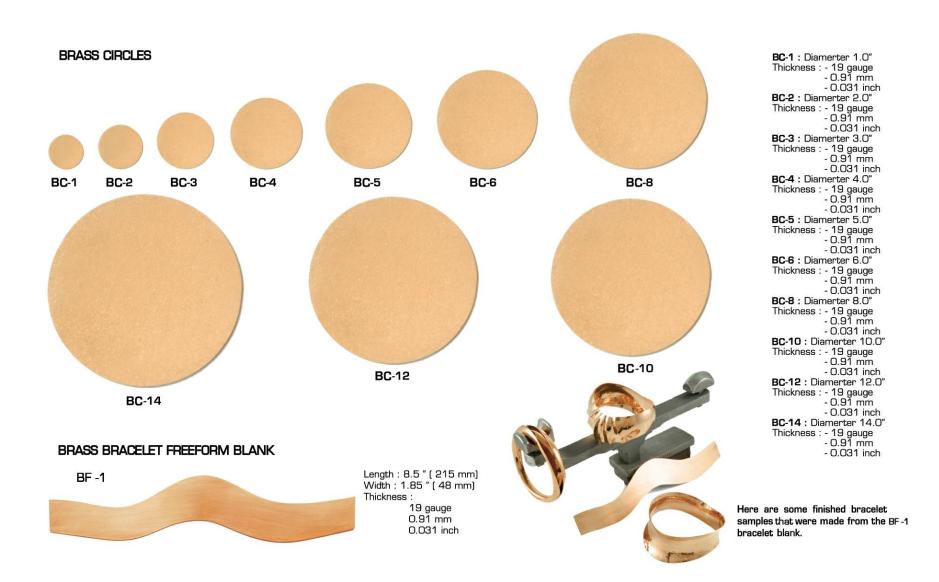
BT-9



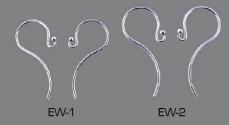
Dimension: 25.4x13mm (1x1/2") x3 Thickness: 18 gauge, .040 inches or . 81mm BT-12



Dimension: 50.8x88.9mm (2x3 1/2") x 1 unit Thickness: 18 gauge, .040 inches or . 81mm



#### ARGENTIUM EAR WIRES



#### **Argentium French Earwires** with single ball

EW-1 20 gauge, Ball: 1.65 mm. Weight: 0.5 g/pairs

EW-2 19 gauge, Ball: 2.0 mm. Weight: 0.71 g/pairs



#### **Argentium French Earwires** closed jump ring.

EW-5 20 gauge, Weight: 0.49 g/pairs

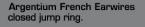
EW-6 19 gauge, Weight: 0.66 g/pairs



#### **Argentium French Earwires** with 4 balls

EW-3 20 gauge, Ball: 1.65 mm. Weight: 0.74 g/pairs

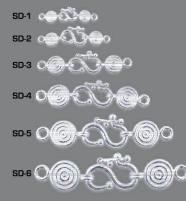
EW-4 19 gauge, Ball: 2.0 mm. Weight: 0.91 g/pairs



EW-7 20 gauge, Weight: 0.49 g/pairs

EW-8 19 gauge, Weight: 0.66g/pairs

#### ARGENTIUM S-CLASPS WITH DISK ENDS



**SD-1**:Length: 1.02" (25.9mm) Width: 0.20" (5.17mm) Weight: 0.62 gram/Piece SD-2:Length: 1.25" (31.74mm) Width: 0.23" (6.07mm) Weight: 1.07 gram/Piece sp-3:Length: 1.8" (45.71mm) Width: 0.31" (7.88mm) Weight: 2.12 gram/Piece sp-4:Length: 1.9" (48.25mm) Width: 0.38" (9.7mm) Weight: 3.59 gram/Piece **SD-5**:Length: 2.35" (59.68mm) Width: 0.44" [11.38mm] Weight: 6.08 gram/Piece **SD-6**:Length: 2.6" (66.03mm) Width: 0.5" (12.8mm) Weight: 8.65 gram/Piece

#### ARGENTIUM S-CLASPS WITH JUMP RINGS

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EW-7



Width: 0.25" (6.36mm) Weight: 0.35 gram/Piece **SJ-2**:Length: 0.65" (16.5mm) Width: 0.31" (8.01mm) Weight: 0.6 gram/Piece SJ-3 :Length: 0.85" (21.58mm) Width: 0.38" (9.79mm) Weight: 1.1 gram/Piece SJ-4:Length: 1.05" (26.6mm) Width: 0.47" (11.98mm) Weight: 2.0 gram/Piece **SJ-5**:Length: 1.5" (31.7mm) Width: 0.56" (14.28mm) Weight: 3.7 gram/Piece

**SJ-1**:Length: 0.5" (25.9mm)

EW-8



SJ-6:Length: 1.35" (34.28mm) Width: 0.59" (15.05mm) Weight: 8.65 gram/Piece

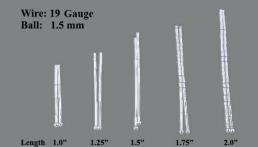
#### ARGENTIUM GRANULATED S-CLASPS



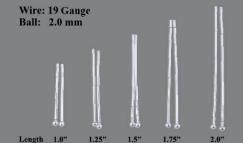
S-CLASP SIZE # 4 Length: 1.87" (47.5 mm) Granulated End Diameter: 11.9mm

Weight: 8.16 gram/Piece

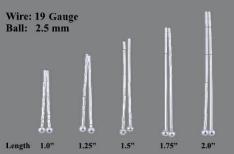
#### ARGENTIUM HEAD PINS WITH SINGLE BALLS



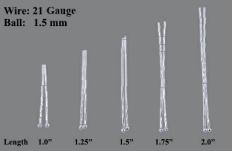
PS19-1 : Ball : 1.5 mm/ Length : 1.0" PS19-2 : Ball : 1.5 mm/ Length : 1.25" PS19-3 : Ball : 1.5 mm/ Length : 1.5" PS19-4 : Ball : 1.5 mm/ Length : 1.75" PS19-5 : Ball : 1.5 mm/ Length : 2.0"



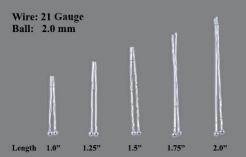
PS19-6: Ball: 2.0 mm/ Length: 1.0" PS19-7: Ball: 2.0 mm/ Length: 1.25" PS19-8: Ball: 2.0 mm/ Length: 1.5" PS19-9: Ball: 2.0 mm/ Length: 1.75" PS19-10: Ball: 2.0 mm/ Length: 2.0"



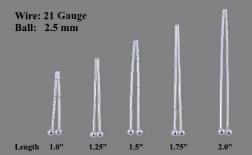
PS19-11: Ball: 2.5 mm/ Length: 1.0" PS19-12: Ball: 2.5 mm/ Length: 1.25" PS19-13: Ball: 2.5 mm/ Length: 1.5" PS19-14: Ball: 2.5 mm/ Length: 1.75" PS19-15: Ball: 2.5 mm/ Length: 2.0"



PS21-1 : Ball : 1.5 mm/ Length : 1.0" PS21-2 : Ball : 1.5 mm/ Length : 1.25" PS21-3 : Ball : 1.5 mm/ Length : 1.5" PS21-4 : Ball : 1.5 mm/ Length : 1.75" PS21-5 : Ball : 1.5 mm/ Length : 2.0"



PS21-6: Ball: 2.0 mm/ Length: 1.0" PS21-7: Ball: 2.0 mm/ Length: 1.25 PS21-8: Ball: 2.0 mm/ Length: 1.5" PS21-9: Ball: 2.0 mm/ Length: 1.75" PS21-10: Ball: 2.0 mm/ Length: 2.0"

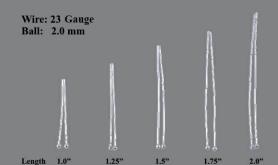


PS21-11: Ball: 2.5 mm/ Length: 1.0" PS21-12: Ball: 2.5 mm/ Length: 1.25" PS21-13: Ball: 2.5 mm/ Length: 1.5" PS21-14: Ball: 2.5 mm/ Length: 1.75" PS21-15: Ball: 2.5 mm/ Length: 2.0"

#### ARGENTIUM HEAD PINS WITH SINGLE BALLS



PS23-1 : Ball : 1.5 mm/ Length : 1.0" PS23-2 : Ball : 1.5 mm/ Length : 1.25" PS23-3 : Ball : 1.5 mm/ Length : 1.5" PS23-4 : Ball : 1.5 mm/ Length : 1.75" PS23-5 : Ball : 1.5 mm/ Length : 2.0"

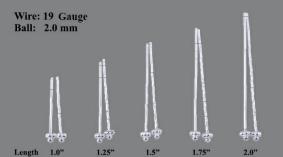


PS23-6 : Ball : 2.0 mm/ Length : 1.0" PS23-7 : Ball : 2.0 mm/ Length : 1.25" PS23-8 : Ball : 2.0 mm/ Length : 1.5" PS23-9 : Ball : 2.0 mm/ Length : 1.75" PS23-10 : Ball : 2.0 mm/ Length : 1.75"

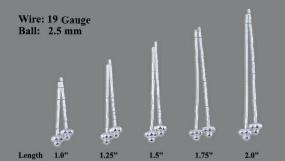
#### ARGENTIUM HEAD PINS WITH 4 BALL GRANULATED CLUSTERS



PF19-1 : Ball : 1.5 mm/ Length : 1.0" PF19-2 : Ball : 1.5 mm/ Length : 1.25" PF19-3 : Ball : 1.5 mm/ Length : 1.5" PF19-4 : Ball : 1.5 mm/ Length : 1.75" PF19-5 : Ball : 1.5 mm/ Length : 2.0"

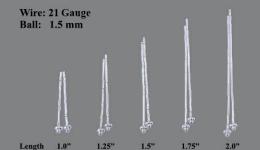


PF19-6: Ball: 2.0 mm/ Length: 1.0" PF19-7: Ball: 2.0 mm/ Length: 1.25" PF19-8: Ball: 2.0 mm/ Length: 1.5" PF19-9: Ball: 2.0 mm/ Length: 1.75" PF19-10: Ball: 2.0 mm/ Length: 2.0

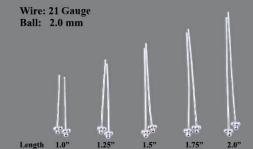


PF19-11: Ball: 2.5 mm/ Length: 1.0"
PF19-12: Ball: 2.5 mm/ Length: 1.25"
PF19-13: Ball: 2.5 mm/ Length: 1.5"
PF19-14: Ball: 2.5 mm/ Length: 1.75"
PF19-15: Ball: 2.5 mm/ Length: 2.0"

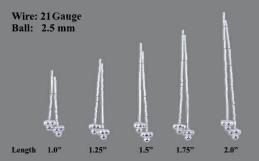
#### ARGENTIUM HEAD PINS WITH 4 BALL GRANULATED CLUSTERS



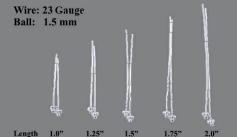
PF21-1: Ball: 1.5 mm/ Length: 1.0" PF21-2: Ball: 1.5 mm/ Length: 1.25" PF21-3: Ball: 1.5 mm/ Length: 1.5" PF21-4: Ball: 1.5 mm/ Length: 1.75" PF21-5: Ball: 1.5 mm/ Length: 2.0"



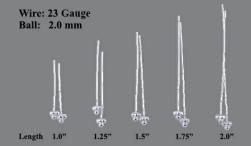
PF21-6: Ball: 2.0 mm/ Length: 1.0" PF21-7: Ball: 2.0 mm/ Length: 1.25" PF21-8: Ball: 2.0 mm/ Length: 1.5" PF21-9: Ball: 2.0 mm/ Length: 1.75" PF21-10: Ball: 2.0 mm/ Length: 2.0"



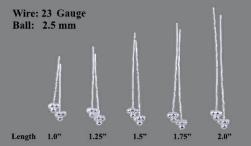
PF21-11 : Ball : 2.5 mm/ Length : 1.0" PF21-12 : Ball : 2.5 mm/ Length : 1.25" PF21-13 : Ball : 2.5 mm/ Length : 1. 5" PF21-14 : Ball : 2.5 mm/ Length : 1.75" PF21-15 : Ball : 2.5 mm/ Length : 2.0"



PF23-1 : Ball : 1.5 mm/ Length : 1.0"
PF23-2 : Ball : 1.5 mm/ Length : 1.25"
PF23-3 : Ball : 1.5 mm/ Length : 1.5"
PF23-4 : Ball : 1.5 mm/ Length : 1.75"
PF23-5 : Ball : 1.5 mm/ Length : 2.0"



PF23-6: Ball: 2.0 mm/ Length: 1.0" PF23-7: Ball: 2.0 mm/ Length: 1.25" PF23-8: Ball: 2.0 mm/ Length: 1.5" PF23-9: Ball: 2.0 mm/ Length: 1.75" PF23-10: Ball: 2.0 mm/ Length: 2.0"



PF23-11: Ball: 2.5 mm/ Length: 1.0" PF23-12: Ball: 2.5 mm/ Length: 1.25" PF23-13: Ball: 2.5 mm/ Length: 1.5" PF23-14: Ball: 2.5 mm/ Length: 1.75" PF23-15: Ball: 2.5 mm/ Length: 2.0"

#### **ARGENTIUM GRANULES**



Diameter ball: 0.5 mm.
There are three Packging Specifications as follows:
AG0.5-1/10 Diameter: 0.5 mm/Weight: 1/10 oz
AG0.5-1/3 Diameter: 0.5 mm/Weight: 1/3 oz
AG0.5-1 Diameter: 0.5 mm/Weight: 1.0 oz



Diameter ball: 0.6 mm. There are three Packging Specifications as follows:

AGO.6-1/10 Diameter: 0.6mm/Weight: 1/10 oz

AGO.6-1/3 Diameter: 0.6mm/Weight: 1/3 oz

AGO.6-1 Diameter: 0.6mm/Weight: 1.0 oz



Diameter ball: 0.7 mm. There are three Packaging Specifications as follows:
AG0.7-1/10 Diameter: 0.7mm/Weight: 1/10 oz
AG0.7-1/3 Diameter: 0.7mm/Weight: 1/3 oz
AG0.7-1 Diameter: 0.7mm/Weight: 1.0 oz



Diameter ball: 0.8 mm. There are three Packaging Specifications as follows:

AGO.8-1/10 Diameter: 0.8 mm/Weight: 1/10 oz AGO.8-1/3 Diameter: 0.8 mm/Weight: 1/3 oz AGO.8-1 Diameter: 0.8 mm/Weight: 1.0 oz



Diameter ball: 0.9 mm. There are three Packaging Specifications as follows:

AGO.9-1/10 Diameter: 0.9mm/Weight: 1/10 oz AGO.9-1/3 Diameter: 0.9mm/Weight: 1/3 oz AGO.9-1 Diameter: 0.9mm/Weight: 1.0 oz



Diameter ball : 1.0 mm. There are three Packaging Specifications as follows:

AG1.0 -1/10 Diameter: 1.0 mm/Weight: 1/10 oz AG1.0-1/3 Diameter: 1.0 mm/Weight: 1/3 oz AG1.0-1 Diameter: 1.0mm/Weight: 1.0 oz



Diameter ball : 1.25 mm. There are three Packaging Specifications as follows:

AG1.25-1/10 Diameter: 1.25 mm/Weight: 1/10 oz AG1.25-1/3 Diameter: 1.25mm/Weight: 1/3 oz AG1.25-1 Diameter: 1.25mm/Weight: 1.0 oz



Diameter ball : 1.5 mm. There are three Packaging Specifications as follows:

AG1.5-1/10 Diameter: 1.5mm/Weight: 1/10 oz AG1.5-1/3 Diameter: 1.5mm/Weight: 1/3 oz AG1.5-1 Diameter: 1.5mm/Weight: 1.0 oz



Diameter ball: 1.75 mm. There are three Packaging Specifications as follows:

AG1.75-1/10 Diameter: 1.75mm/Weight: 1/10 oz AG1.75-1/3 Diameter: 1.75mm/Weight: 1/3 oz AG1.57-1 Diameter: 1.75mm/Weight: 1.0 oz



Diameter ball : 2.0 mm. There are three Packaging

Specifications as follows:

AG2.0-1/10 Diameter: 2.0mm/Weight: 1/10 oz AG2.0-1/3 Diameter: 2.0mm/Weight: 1/3 oz AG2.0-1 Diameter: 2.0 mm/Weight: 1.0 oz

#### **CLUSTER KITS**

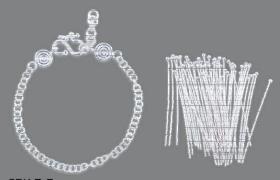
#### **CLUSTER EARING 1.0" KIT**



**CEK 1.0** 

Car wire : 20 gauge Single Ball
Chain Length : 1.0"
Pin Length: 1.46" Head Diameter : 1.55 mm
Pin wire : 23 gauge Weight : 3.4 gram/kit :

#### **CLUSTER BRACELET 7.5" KIT**



CBK 7.5
SD-CLASP SIZE # 3
Length : 6.5" / Extra Length : 1.0"
Pin Length: 1.48" Head Diameter : 1.5 mm
Pin wire : 23 gauge Weight : 11.4 gram/kit

#### **CLUSTER EARING 1.5" KIT**



CEK 1.5
Ear wire: 20 gauge Single Ball
Chain Length: 1.5"
Pin Length: 1.46" Head Dia
Pin wire: 23 gauge Weight: Head Diameter: 1.55 mm Weight: 3.5 gram/kit:

#### **CLUSTER BRACELET 8.5" KIT**



CBK 8.5
SD-CLASP SIZE # 3
Length: 7.5" / Extra Length: 1.0"
Pin Length: 1.48" Head Diameter: 1.5 mm
Pin wire: 23 gauge Weight: 12.6 gram/kit

#### **CLUSTER EARING 2.0" KIT**



#### **CEK 2.0**

Ear wire: 20 gauge Single Ball
Chain Length: 2.0"
Pin Length: 1.46" Head Diameter: 1.55 mm
Pin wire: 23 gauge Weight: 3.6 gram/kit:

#### FINISHED CLUSTER JEWELRY SAMPLE



Seaglass not included in Cluster Kits. \* SEAGLASS SOLD SEPARATELY \* Fretz Hammers and Stakes are designed by William Fretz and Jordan Fretz.

The tools are made in Jordan's workshop in Vietnam by skilled craftsmen who take pride in crafting very fine tools.

Each tool was needed in our own work and carefully thought out to continue the tradition of fine craftsmanship.

Fretz Findings are designed by Jordan Fretz. All the Fretz Findings reflect the desire for fine design, quality craftsmanship and functionality.

William Fox Fretz II Jordan Revere Fretz

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